Chapter D7: Conclusions

The results of EPA's evaluation of the dollar value of I&E losses at Big Bend (as calculated using benefits transfer (Chapter D4) indicate that economic losses range from $59,600 to $65,900 per year for impingement and from $7.0 million to $7.3 million per year for entrainment (all in $2000). Economic losses associated with I&E at all in scope facilities in Tampa Bay (Big Bend, PL Bartow, FJ Gannon, and Hookers Point) range from $146,800 to $162,200 for impingement and from $17.2 million to $18.1 million per year for entrainment.

EPA also developed a random utility model (RUM) to estimate recreational losses associated with I&E in the Tampa Bay case study area. As shown in Chapter D5, the average annual recreation-related losses for three species at the in scope facilities amount to approximately $2.4 million per year (impingement and entrainment impacts combined). Results for the RUM analysis (Chapter D5) were merged with the benefits transfer-based estimates (Chapter D4) to create an estimate of recreational losses from I&E (as shown in Chapter D6). Losses incorporating RUM results for all in scope facilities range from $0.79 million to $0.80 million per year for impingement and from $19.6 million to $20.95 million per year for entrainment (all in $2000).

EPA also estimated the economic benefit of a range of I&E reductions for the four in scope facilities (Chapter D6). The resulting estimates of the economic value of an 80% reduction in I&E range from $0.63 million to $0.64 million per year for impingement reductions, and from $15.7 million to $16.4 million per year for entrainment reductions (all in $2000).

For a variety of reasons, EPA believes that the estimates developed here underestimate the total economic benefits of reducing I&E at Tampa Bay facilities. EPA assumed that the effects of I&E on fish populations are constant over time (i.e., that fish kills do not have cumulatively greater impacts on diminished fish populations). EPA also did not analyze whether the number of fish affected by I&E would increase as populations increase in response to improved water quality or other improvements in environmental conditions.